MINUTES
MICHIGAN STATE TRANSPORTATION COMMISSION WORKSHOP
October 28, 2004
Lansing, Michigan

Meeting noticed in accordance with Open Meetings Act, Public Act 267 of 1976.

Present: Ted Wahby, Chairman
Betty Jean Awrey, Vice Chairwoman
Robert Bender, Commissioner
John Garside, Commissioner
Linda Miller Atkinson, Commissioner
Vincent J. Brennan, Commissioner

Also Present: Gloria J. Jeff, Director
Kirk Steudle, Chief Deputy Director
Frank E. Kelley, Commission Advisor
Marneta Griffin, Executive Assistant
Denise Jackson, Administrator, Statewide Planning
John Polasek, Bureau Director, Highway Development
Jerry Jones, Commission Auditor
Larry Tibbits, Chief Operations Officer
Patrick Isom, Assistant Attorney General
Myron Frierson, Bureau Director, Finance and Administration
Susan Mortel, Bureau Director, Transportation Planning

A list of those people who attended the meeting is attached to the official minutes.

Chairman Wahby called the meeting to order at 10:20 a.m. in the Bureau of Aeronautics Commission Conference Room in Lansing, Michigan.

Denise Jackson gave a PowerPoint presentation on System Preservation Goals.

Director Jeff gave opening remarks stating that this workshop will provide the Commission an opportunity to see the end results of the 2004 activities and how they were done. A series of goals were established in 1997 relating to pavement and bridge conditions. Over the course of the last twenty months, MDOT has reported back to the Commission with updates to the process. Last year we focused on the fact that we had made modifications to our predictive modal, but not updated the quality of the data. We have now completed the update of the data quality as well, and are ready to present what we perceive to be the current condition of the system, and to talk about the investment strategy that the Commission has had in place and how it has performed in the last couple of years.

Review of November 2003 Workshop:
Denise Jackson gave a brief re-cap of the 2003 workshop where they discussed the Asset Management approach and benefits, identified the pavement and bridge condition measures and forecasting tools use, presented how investment strategies are developed, outlined our program development (Call for Projects) process.

The Asset Management approach to system preservation involved **setting preservation goals**: Roads—95% of freeways and 85% of non-freeways in good condition by 2007; bridges—95% of freeway bridges and 85% of non-freeway bridges in good condition by 2008. Preservation involves repairing an existing pavement or bridge to restore the transportation facility to a better condition state. Preservation work does not involve adding capacity. Improvements take place within the existing shoulder to shoulder alignment. Major preservation improvements upgrade a facility to the latest FHWA and State requirements. Preservation can be categorized in three ways: **long term** (reconstructing an existing road or bridge facility), **medium term** (rehabilitating an existing road or bridge facility), and **short term** (preventive maintenance work on an existing road or bridge facility);

Collecting the data:
This has been instrumental in establishing the goals. In 2003 Ms. Jackson and her staff informed the Commission that a key piece that needed to be done was updating the data;

Rates of deterioration:
New pavement, as it gets older, will begin to deteriorate. When plotted on a graph, the line will have an s-curve shape to it;

Performance measures:
Once the condition data has been analyzed, we look into the performance measurement standards. These standards are verified on an annual basis through the Call for Projects process. Key to performance measures for roads is the Remaining Service Life (RSL). This takes into consideration, not only the current condition of the system, but the deterioration rate as well. A zero RSL doesn't mean that it is not drivable, just that it is in poor condition. The performance measure used for bridges is the National Bridge Inspection (NBI) condition rating for deck, superstructure, and substructure;

Developing investment strategies:
Along with the RSL and NBI forecasting systems, such as Road Quality Forecasting System (RQFS) and Bridge Condition Forecasting System (BCFS), as well as a mix of fixes, are used to develop investment strategies. These tools combined allow us to do alternative analysis and be able to reasonably predict results before they actually happen. They provide a framework for candidate project selection;

Programs, projects and practices:
Identifying projects and developing programs consistent with our goals and the data collected, measuring them against the performance standards annually through the Call for Projects process, we convey to the Commission the Five Year Transportation Program;

Adjusting along the way:
Issues have been identified with the data and tools making it necessary for monitoring, feedback and making adjustments along the way.

There are key benefits to taking the Asset Management approach, such as strategic, proactive, integrated, systematic, interdisciplinary, advanced systems, continuous assessment, systems approach, forward thinking.

Ms. Jackson asked for questions; none were forthcoming, and she turned the presentation over to Dan Sokolnicki of the Pavement Management Unit to present the next section.

Updating the Remaining Service Life Data and Improving the Process
Mr. Sokolnicki talked about the key refinements that have been done over the last year to update the data; how to make the system better—automating the process to make it more efficient. **PaveMaPP Project** (**Pave**ment **Ma**nagement **P**rocess **P**lan) was created to enable the creation of Automated Uniform Sectioning Logic and the creation of Automated Remaining Service Life Estimation Logic. Benefits to-date of the PaveMaPP Project includes Database Environment (improved data consistency and security, improved system efficiency and versatility), and First Time Automation (more current and consistent results, faster processing, and easier implementation of system adjustments).

Commissioner Atkinson asked, when we say "how can we make this better", what is meant by "better"? Does that mean "more accurate", "a better predictor", or "more comprehensive"?

Mr. Sokolnicki responded that the idea of using an estimate of life, such as RSL, it is an on-going process of making it better. Every two years data is collected. Without automation in place it is very difficult to process the data that is collected.

Commissioner Atkinson then stated that, as she understands it, one of the issues the Commission is asking for help with, is how to take the group of things referred to as "cosmetics" and the data, to come up with a descriptor so that we can communicate with the public. Just because a computer may say, for example, that a road has ten more years of life, and a person on the phone says the same road is no longer useful—that is not communication.

Mr. Sokolnicki stated that because of this, it is the departments' responsibility to do the tracking and find out the underlying reason.

Director Jeff stated that we are multi-tasking in that, while we will continue to make sure that we have a technically sound process as described here and will continue to use that in guiding our investment and in providing information to the Commission about what our investment needs to be, we also recognize that we have to communicate to the public. We are not going to try and create one tool that does both. We will create the public descriptor piece that will take the technical data and translate it into something the public is comfortable with, but we will continue to do the kind of rigorous technical component to guide the investment.

No other questions were forthcoming.

Pavement Condition Goals
State trunkline roads RSL distribution shows an average network life improvement of 30% since 1996 (38% vs. 18% in 2004). At our current funding level, we expect to be at 91% good on the freeway system in 2007. Preserve First dollars have been key in that we have been able to focus on the high volume routes and make progress. We expect from 2004 through 2007 to make even better progress. At our current funding level, we expect to be at 85% good on the non-freeway system in 2007 – nearly reaching the goal. When we began, the non-freeway system was 56% good (half in poor condition), but we are currently at 81% good. An important factor to

remember is that this is being done without reauthorization dollars.

Commissioner Brennan wanted to know what we were using since we don't have reauthorization dollars.

Director Jeff responded that we are utilizing the assumptions that are in the current Five Year Program that the Commission approved, which is a growth of about 3.2% in federal funding. It is simply an estimate. We know that if the numbers that the House and Senate would prefer to have are reached, we will be in excess of that 3.2%, but if we end up with the Presidents' number, we will be substantially below that. We needed something to start with, and so there would be consistency in our investment strategies we utilized the 3.2%.

Commissioner Brennan stated that obviously that includes, too, the bonding we just did.

Director Jeff answered in the affirmative.

Ms. Jackson stated that we are making good progress however we need more money to keep up that level of progress, especially since the forecast for non-freeway system shows a decline after 2007 to about 69% good by 2014.

Director Jeff interjected that we are anticipating that additional funding to be primarily, or almost exclusively, federal funds.

Ms. Jackson asked for questions; none were forthcoming.

As part of the Asset Management approach the department looked at alternatives. Multiple "What If" scenarios have been developed, which includes a variety of mix-of-fixes. Alternative analyses considered long-term system health, program costs, traffic disruption, and impacts to the construction industry. Two alternatives offering the greatest benefits included: **Alternative #1** (achieving the 2007 Freeway and Non-Freeway Pavement Goal, sustaining the Freeway Goal long-term, sustaining the Non-Freeway Goal near-term); **Alternative #2** (achieving and sustaining the Freeway Pavement Goal--freeway focus). Each alternative has benefits and challenges. Alternative #1 requires a substantial additional investment over three years, estimated at an additional $475 million ($235 million freeway—93% good by 2014, and $240 million non-freeway—only a 79% good decline by 2014.)

Commissioner Brennan asked, in a hypothetical world, if the $475 million would be invested over the next three years, and what happens then.

Ms. Jackson answered in the affirmative, and stated we would then go back to the existing Five Year Program level.

Director Jeff interjected that it would be $475 million over three years; it's not equally divided.

Ms. Jackson added that most of it would be in 2006 and 2007 because of the type of projects.

Ms. Mortel asked Ms. Jackson to go back to the previous slide (Alternative #1-freeway with additional $235 million funding), and stated that what would happen over the next three years, the additional money would allow us to concentrate on the long term fixes so that instead of more pavement falling into the "poor" category (condition), we can put them into the "good" category to achieve a stabilizing affect on the system.

Mr. Polasek interjected that what happens after the pavement is in the "good" category, we can use preventive maintenance projects to keep it in that condition. Preventive maintenance projects cost a lot less to do to keep a good pavement in good condition and fair pavement in fair condition.

Benefits of Alternative #1: meet and sustain the freeway goal long term, meet the non-freeway goal and sustain in the near term, continue to support the concept of long term system health, visible impact to the system. Challenges to implementing Alternative #1: costly alternative that requires additional bonding or reauthorization funds, increasing user delay (hassle factor), may result in higher construction costs due to increased work in short timeframe, very close coordination required with other programs, cities, counties and projects that border MDOT regions.

Ms. Jackson asked for questions; none were forthcoming.

Because the additional funding is not there at this time, Alternative #2 would allow us to focus towards most traveled routes, a variety of fix strategies, and investment levels ranged from an additional $150 million to $250 million over three years. The impacts under this alternative is that routes with higher traffic volumes (most users and commercial vehicles) would have better pavement condition, investment is less costly than Alternative #1, may achieve the freeway goal statewide; however, could have noticeable differences within parts of the state and along stretches of major corridors.

Director Jeff stated, in looking at the data with this array of alternatives, is that because of our focus on the worse roads first, we would not have good geographic distribution around the state. There would be portions of the state where the level of investment would be substantial, not necessarily disadvantaging other parts of the state, but adding to a perception by those parts whose roadways are already in good condition, that they are somehow not receiving the level of attention they deserve. We are wrestling with how to assure a kind of balance in taking the service to all citizens in some manner.

Commissioner Brennan asked if they are prioritizing different projects when using the figures $150-$250 million (Alternative #2) and $235 million (Alternative #1) if they are both for freeways.

Director Jeff answered that we could have picked $100 million or $150 million. The professional judgment of Team MDOT was that the $150-$250 million range was a reasonable range.

Ms. Jackson stated that the $250 million would be comparable to the $235 million.

Director Jeff further stated that in both instances we will meet the goal, but the length of time in which we will be able to sustain achievement is lengthened or shortened.

Commissioner Atkinson asked if the "hassle factor" was a wash between alternatives 1 and 2. If we are concentrating our attention on the freeways with the higher traffic volumes where we expect more people to be traveling, wouldn't we get the same hassle factor more or less.

Ms. Jackson answered in the affirmative.

Additional impacts of Alternative #2 are no additional funding for non-freeway system, significant decline in non-freeway condition after 2007, and users may not be satisfied with non-freeway condition.

Commissioner Brennan asked if the source of additional funds would be bonding.

Director Jeff and Ms. Jackson both answered in the affirmative and that it could also come from additional federal funds.

After all the analysis and discussion, decisions had to be made on how to proceed. Where is the balance between achieving goals and maintaining financial health? Federal Reauthorization funding is uncertain; therefore it is prudent at this time to take a conservative approach. MDOT recommends not changing the pavement goal of 95% good freeways and 85% good non-freeways. The current strategy is good. We are making good progress – even without the benefit of reauthorization dollars. We expect to be at 91% good freeway, 84% good non-freeway in 2007. Preserve First is clearly working. Additionally, we are not recommending additions to the Program at this time. Sustaining the goal is still an issue, however, we know we will need to add to the Program at some point, we will do so in the context of the new pavement descriptor.

We are recommending that our next steps be obtaining reauthorization funding to stabilize our revenue projections. We need feedback from the public through descriptor teamwork and focus groups, continue to implement the current program and monitor progress while providing annual feedback to the Commission. There is much financial instability without reauthorization.

Ms. Jackson asked for questions on the Pavement Preservation Goals.

Commissioner Garside asked if anything will happen with the reauthorization before May 2005.

Director Jeff answered that the most recent extension goes through the end of May 2005. Our expectation is that there will be fairly limited amount of legislative/congressional activity during the lame duck portion. With a new House of Representatives having been elected come January 2005, they take approximately three weeks to get themselves organized, the first round of meetings organized; they will then have to introduce a brand new piece of legislation because the old one will have expired with the end of the official session of Congress. We will begin with the process again, and if there is an early introduction, it is an introduction of a new bill and we are back at the table educating newly elected members, dealing potentially new membership and leadership in both the House and Senate on these committees. It will simply take time.

Bridge Condition Goals

Dave Juntunen, Bridge Operations Engineer, continued with the presentation. The Bridge Preservation Program is built upon sound asset management principles. The goals were established in 1998 to immediately address the needs of 100% of structures of critical concern, have 95% of freeway bridges in good or fair condition by 2008, 85% of non-freeway bridges in good or fair condition by 2008. They were based upon condition ratings for major elements; deck, superstructure, and substructure. If any of the three major elements are rated poor, the bridge is considered poor. The bridge preservation strategy involves taking care of our worst bridges first. We are using a Corridor Management and coordination with road program, managing our entire network of bridges with a mix of fixes made up of replacement, rehabilitation, and preventive maintenance. The statewide strategy currently is doing 20% preventive maintenance, 30% rehabilitation, and 50% replacement. The strategy is tailored for each Region.

Replacement projects include deck replacement, superstructure replacement, and bridge replacement. This involves taking bridges that are in critical, serious or poor condition, and fixing them so that they are in the good or excellent condition range. These projects are expensive--$1.2 to $1.8 million.

Rehabilitation projects include deck overlays, superstructure repairs, and substructure repairs. This involves taking bridges that are in poor or fair condition, and fixing them so that they are in the good or excellent condition range. These projects cost from $500,000 to $700,000.

Preventive maintenance projects include joint replacements, pin and hanger replacements, complete painting, zone painting, epoxy overlays, and deck patching. Preventive maintenance slows the deterioration rate, and is cost effective--$200,000 to $300,000.

The Bridge Program in dollar value totals $193 million (Region Allocation, $162 million; Large Deck, Segmental and Movable Bridges, $10 million; Special Needs—i.e., emergency response, $3 million; Capital Scheduled Maintenance $10 million; Preserve First $8 million). Bridge emerging technology has allowed us to use better materials (high performance concrete, composite materials, stainless steel rebar), have better designs (integral bridges, eliminate expansion joints), and we are looking at Rapid Construction Technology (pre-cast bridge elements).

Director Jeff interjected that this is some of the new emerging technology that affects our ability to do good engineering estimates because we have not used it in the past.

Mr. Juntunen asked for questions; none were forthcoming.

We have achieved our non-freeway bridge goal statewide, and by 2008 we will have achieved our goal in each of the seven regions. We are confident that we can sustain that goal with our current program. Several accomplishments have been made in this area such as slowing the bridge deterioration rate (reduced bridges entering the poor category by 60%), moved from a reactionary to a proactive bridge program (285 serious and critical bridges are included in the 2005 – 2009 Call for Projects), built a Quality Preventive Maintenance (PM) Program (over 400 Preventive Maintenance projects are included in the 2005 – 2009 Call for Projects), and we took

care of the needs of our Large Deck, Segmental and Movable Bridges (Projected Condition in 2008 – 97% good/fair).

We are making good, steady progress towards our freeway bridge goal, but are not on track to meet the goal by 2008. Challenges that have been identified include high cost of freeway bridge projects (improving bridges on our freeways can be very expensive), other non-highway bridge needs are being addressed (pedestrian bridges, culverts 10–20 feet, railroad bridges), and bridge functional needs (widening, under-clearance, safety). Additional funds are needed to meet the freeway bridge goal by 2008 ($156 million per year; $468 million for three year total—however, this is not recommended), as well as more time. More time because of construction costs (increased work in a short timeframe may result in higher construction costs, which would limit our effectiveness), project selection and design time (adequate time is needed for proper selection and design of bridge projects), user delay (large number of construction projects will create excessive user delays), bridge improvements will need to meet future capacity demands, and we must meet Federal guidelines (under-clearance, bridge width, safety).

Director Jeff explained that this would also depart us from a coordinated strategy with respect to pavements and bridges. Rather than doing pavements one year and waiting a couple years to then do bridges, we could coordinate them at the same time, and deliver a better overall product, reducing the hassle factor by not putting everyone in gridlock with routes being completely shut down.

Recommendations for bridge preservation are to remain committed to achieving a goal of 95% freeway bridges in good/fair condition, obtain additional funds ($45 million per year contingent upon reauthorization; $315 million for seven year total) and time (move target date to meet the freeway bridge goal to 2012, and adjust the program to increase bridge funding by $45 million per year for seven years (2006–2012) when reauthorization funding becomes available).

Next steps would be to put additional bridge projects into production in order to be prepared for increased reauthorization funding, continue to monitor condition data and further enhance our bridge management system, work with FHWA to develop strategy to improve bridges with substandard vertical under-clearance and other functional needs.

Commissioner Brennan asked where the additional $45 million per year would come from.

Mr. Juntunen stated that it would depend on reauthorization.

Director Jeff interjected that we are not asking for additional funding at this time, but when we look ahead to see what our future investment needs to be, we know we need additional investment. However, because of the instability in the Federal program, we are not asking for additional funding now.

Commissioner Atkinson asked if they have been able to do any calculations, using the graphs for replacement versus rehabilitation versus preventive maintenance, to tell us how many bridges will move from fair to poor, increasing the cost of their eventual updating/preservation, if we move our goal by four years.

Mr. Juntunen stated that the bridge condition forecast system continually moves, using statistics, a certain percentage of those bridges into the poor category each year. When we run this forecast system, we can change the percentages of preventive maintenance, rehab and replacement. We run various scenarios to tell us which one is more efficient to do. By doing the preventive maintenance we will still be keeping that deterioration rate down. We believe it will continue to drop, but there will always be some amount of bridges that will be good, fair or poor.

Commissioner Atkinson stated that, if she understands his answer, he's saying that the department doesn't know exactly, but based upon what they have, it doesn't significantly affect the overall cost of adding the four years.

Director Jeff responded that it does and it doesn't. Because we don't actually select the specific bridges to be done—we give the model the basic overall data—it goes through and simply says if we have "Y" number of bridges in this general condition, here is what will happen. The exact cost associated with it then comes back to the exact set of bridges. For example, if we had a year where 80% of the bridges were in the rural environment and, what we were adding were urban bridges, we might have more of an increase than if 80% of them were urban and we only added rural ones.

Mr. Juntunen stated that one of the things many of the regions are doing is, if they identify a bridge that is fair and the inspector feels that upon next inspection it will be in the poor category, the go ahead and schedule the preventive maintenance or get it into the program.

No other questions were forthcoming.

Traffic and Safety Program
Mr. Juntunen introduced Mark Bott, Engineer-Manager Traffic Control Devices, Traffic and Safety Division for the final portion of the presentation.

The goal of the Traffic Safety Program (TSP) is to increasing the safety and efficiency of the state highway system through the department by reducing traffic crashes and fatalities/injuries, vehicle delay, fuel consumption and pollution, and operating costs. The total budget for this stand alone program is $58 million and has five distinctive categories:

Signing - $13million - Replacement cycle of 15 years, improve visibility of signs along corridors, update sign legends, and improve sign installations. Fluorescent yellow warning signs help to revise the standard resulting in 65% increase in reflectivity, increased daytime visibility (3 to 1), and overall improved warning sign system for our target audience.

Pavement Markings - $13 million - Goal is to provide a year-round, all-weather retro reflective marking system. This is done by requiring a minimum level of reflectivity, and evaluation of new products and placement methods. Pavement Marking Initiatives increased the width of edge lines and interchange gore markings, and added high quality markings on long life pavements.

Traffic Signals - $8 million – LED traffic signals improved visibility. These require 10% of the power of traditional signals and will be used on all new installations.

Guardrail Replacement - $5 million – A stand alone program to upgrade deficient roadside barriers, and address crash patterns correctable with barrier protection. This is part of the Call for Projects process.

Safety Programs - $19 million – Conduct analyses of traffic crashes and crash patterns. Projects have to be justified through a cost/benefit analysis. This is part of the Call for Projects.

TSP also encompasses the Roadway Departure Initiatives to put shoulder rumble strips on the freeways. Roadway departures are the cause of 48% of fatal crashes. Rumble Strips provide early warning or "wake up", reduces drift-off crashes by 40%. A milled in standard of rumble strip was adopted in 2000. Since that time we have put in 466 miles (1,865 shoulder miles) of strips, preventing 177 crashes annually (4 fatal, 20 incapacitating). The cost of this was $3.25 million with a Time-of-Return of eight months.

For the future of Traffic Safety, Michigan's goal is 1.0 fatality per 100 million vehicle miles traveled by 2008 (that is also a national goal). Currently we are at 1.3 and nationwide 1.5. This is a shared effort between the City, County, and MDOT. In 2003 there were 1,283 deaths (61% occurred on city and county roadways, and 39% MDOT).

MDOT will add two dedicated traffic engineer positions to help identify high crash locations, produce region wide maps locating A/K Crashes (serious injury/fatality).

Director Jeff clarified that we are not adding full-time employees to the overall MDOT force; we are re-deploying some engineering positions.

Mr. Bott went on to state that the engineers, when working with the local agencies, will help with diagramming from crash reports, give them some statistics on time-of-return analysis on countermeasures, and field inspections with agency staff.

The vision for MDOT's future TSP needs to be context focused. First is, and most importantly, the elder driver, pedestrians, traffic operations, roadway delineation, and safety programs. In 2001, 16% of drivers were 65 or over. By 2020, 25% will be 65 or over. Involvement in crashes has increased in the last 10 years: 18% of all crashes (44,393 in 2001) and 28% of fatal crashes (237 in 2001). The initiatives being evaluated for elderly drivers are brighter sign legends (particularly Overhead Guide Signs), clearer fonts on guide signs, traffic signal displays (visibility). The targets developed for these three efforts for elders are: brighter guide signs - $2 million, clear view font - $1.5 million, and increased signal visibility - $2.5 million.

Additionally, other targets were developed for: pedestrians (countdown signals) - $500,000, traffic operations (roundabouts) - $2 million.

Director Jeff interjected some information about roundabouts. They are principally used in low to moderate volume locations. They are part of the tool kit, but not the exclusive tool kit in traffic operations.

Mr. Bott continued with the targets developed for traffic operations (signal retiming—decrease in delay and gas consumption, 625 signals in Oakland and 150 in Wayne/Macomb Counties—

trunkline only) - $2.3 million.

Chairman Wahby stated that a good example of that would be M-59 with all the traffic causing a lot of problems.

Mr. Bott stated that there are some balances too. Improving the east-west corridor means that there could be some problems created for the north-south corridor.

Other targets developed for traffic operations (center rumble strips—improves nighttime visibility of the centerline) - $700,000, roadway delineation - $700,000, painting traffic islands - $400,000, safety programs - $4 million budget increase.

Recommendations for MDOT's future TSP are to continue with the current program, continue evaluation of devices in the focus areas, with reauthorization increase the program to $75 million.

Establish Next Steps
Ms. Jackson gave a brief re-cap of recommendations:

Pavement - Do not change the pavement goal, retain the 95%/85% good by 2007, not adding to the program at this time, but add to the program later in the context of new pavement descriptor feedback, continue to implement the current program, monitor, and return when more is known about reauthorization.

Bridges - Remain committed to achieving a goal of 95% freeway bridges in good/fair condition, move target date to meet the freeway bridge goal from 2008 to 2012, adjust the program to increase bridge funding by $45 million per year for seven years (2006-2012).

Safety - Remain committed to MDOT's Safety Goal, and to increase the Safety Program to $75 million when reauthorization funds become available.

Director Jeff stated that this is basically a status report showing where we are at with respect to the pavement goal, bridges and safety. In the context of the dollars associated with both the bridge and safety program, we are not asking the Commission to commit to those specific dollar amounts at this time, but rather that, after reauthorization we will come back.

Chairman Wahby asked if she was looking for concurrence on what we have now.

Director Jeff answered that that is what we are requesting.

Commissioner Awrey commended the Director and her staff for their work in putting the presentation together.

Chairman Wahby asked if any Commission members had questions for Ms. Jackson or any of the other presenters; none were forthcoming.

ADJOURNMENT

There being no further business to come before the Commission, the Chairman declared the meeting adjourned at 12:10 p.m.

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Frank E. Kelley
Commission Advisor